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Dkt. 66833-A-PCT-US/JPW/BJA/ML

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicant : Jingyue Ju  
U.S. Serial No. : 10/521,206  
Filing Date : November 9, 2006  
For : MULTIPLEX GENOTYPING USING SOLID PHASE  
CAPTURABLE DIDEOXYNUCLEOTIDES AND MASS  
SPECTROMETRY

1185 Avenue of the Americas  
New York, New York 10036  
May 2, 2007

Mail Stop Amendment  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

**INFORMATION DISCLOSURE STATEMENT**

In accordance with his duty of disclosure under 37 C.F.R. §1.56, applicant directs the Examiner's attention to the following items which are listed on the attached Form PTO-1449 (**Exhibit A**). Items 1-48 are U.S. Patents or U.S. Patent Application Publications. As permitted by 37 C.F.R. 1.98(a)(2)(ii), no copies of these items are included herewith. In addition, as permitted by 37 C.F.R. 1.98(d), copies of references 49-54, and 62-114 are not included, as these references were previously submitted to, or cited by the Office in connection with the following application which is relied on for an earlier effective filing date under 35 U.S.C. 120: U.S. Serial No. 10/194,882, filed July 12, 2002. Copies of references 55-61, and 115-146 are attached hereto as Exhibits 1-39, respectively.

1. U.S. Patent No. 4,824,775, issued April 25, 1989, Dattagupta;
2. U.S. Patent No. 5,118,605, issued June 2, 1992, Urdea;

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3. U.S. Patent No. 5,174,962, issued March 3, 1999, Ju;
4. U.S. Patent No. 5,302,509, issued December 4, 1994, Cheeseaman;
5. U.S. Patent No. 5,599,675, issued February 4, 1997, Brenner;
6. U.S. Patent No. 5,654,419, issued August 5, 1997, Mathies;
7. U.S. Patent No. 5,728,528, issued March 17, 1998, Mathies;
8. U.S. Patent No. 5,763,594, issued June 9, 1998, Hiatt et al.;
9. U.S. Patent No. 5,770,367, issued June 23, 1998, Southern;
10. U.S. Patent No. 5,789,167, issued August 4, 1998, Konrad;
11. U.S. Patent No. 5,804,386, issued September 8, 1998, Ju;
12. U.S. Patent No. 5,808,045, issued September 15, 1998, Hiatt et al.;
13. U.S. Patent No. 5,814,454, issued October 29, 1998, Ju;
14. U.S. Patent No. 5,834,203, issued November 10, 1998, Katzir;
15. U.S. Patent No. 5,849,542, issued December 15, 1998, Reeve et al.;
16. U.S. Patent No. 5,853,992, issued December 29, 1998, Glazer;

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17. U.S. Patent No. 5,869,255, issued February 9, 1999, Mathies;
18. U.S. Patent No. 5,872,244, issued February 16, 1999, Hiatt et al.
19. U.S. Patent No. 5,876,936, issued December 29, 1992, Ju;
20. U.S. Patent No. 5,885,775, issued March 23, 1999, Haff et al.;
21. U.S. Patent No. 5,945,283, issued August 31, 1999, Kwok;
22. U.S. Patent No. 5,952,180, issued September 14, 1999, Ju;
23. U.S. Patent No. 6,028,190, issued February 28, 2000, Mathies;
24. U.S. Patent No. 6,046,005, issued April 4, 2000, Ju;
25. U.S. Patent No. 6,074,823, issued June 13, 2000, Hubert;
26. U.S. Patent No. 6,136,543, issued October 24, 2000, Anazawa et al.;
27. U.S. Patent No. 6,197,557, issued March 6, 2001, Markarov et al.;
28. U.S. Patent No. 6,214,987, issued April 10, 2001, Hiatt et al.;
29. U.S. Patent No. 6,218,118, issued April 17, 2001, Sampson;

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30. U.S. Patent No. 6,232,465, issued May 15, 2001, Hiatt et al.;
31. U.S. Patent No. 6,312,893, issued November 6, 2001, Van Ness et al.;
32. U.S. Patent No. 6,316,230, issued November 13, 2001, Egholm;
33. U.S. Patent No. 6,361,940 issued March 26, 2002, Van Ness et al.;
34. U.S. Patent No. 6,613,508, issued September 2, 2003, Ness et al.;
35. U.S. Patent No. 6,627,748, issued September 30, 2003, Ju et al.;
36. U.S. Patent No. 6,664,079 issued December 16, 2003, Ju et al.;
37. U.S. Patent No. 6,664,399, issued December 16, 1993, Sabesan;
38. U.S. Patent No. 7,074,597, issued July 11, 2006, Ju;
39. U.S. Application Publication No. 2002/0168642 A1, published November 14, 2002 (Drukier);
40. U.S. Application Publication No. 2003/0008285 A1, published January 9, 2003 (Fischer);
41. U.S. Application Publication No. 2003/0022225 A1, published

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January 30, 2003 (Monforte et al.);

42. U.S. Application Publication No. 2003/0027140, published February 6, 2003 (Ju et al.);
43. U.S. Application Publication No. 2003/0044871, published March 6, 2003 (Cutsforth et al.);
44. U.S. Application Publication No. 2003/0099972, published May 29, 2003 (Olejnik et al.);
45. U.S. Application Publication No. 2004/0185466, published September 23, 2004 (Ju et al.);
46. U.S. Application Publication No. 2005/0032081, published February 10, 2005 (Ju et al.);
47. U.S. Application Publication No. 2006/0057565, published March 16, 2006 (Ju et al.);
48. U.S. Application Publication No. 2006/0003352, published January 5, 2006 (Lipkin et al.);
49. PCT International Publication No. WO 91/06678, May 16, 1991;
50. PCT International Publication No. WO 00/53805, September 14, 2000;
51. PCT International Publication No. WO 01/92284, December 6, 2001;

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52. PCT International Publication No. WO 02/079519 A1, published October 10, 2002;
53. PCT International Publication No. WO 02/22883 A1, published March 21, 2002;
54. PCT International Publication No. WO 02/29003, published April 11, 2002;
55. PCT International Publication No. WO 01/27625 A1, published April 19, 2001 (**Exhibit 1**);
56. PCT International Publication No. WO 04/007773, published January 22, 2004 (**Exhibit 2**);
57. PCT International Publication No. WO 04/055160, published January 22, 2004 (**Exhibit 3**);
58. PCT International Publication No. WO 05/084367, published September 15, 2005 (**Exhibit 4**);
59. PCT International Publication No. WO 06/073436, published July 13, 2006 (**Exhibit 5**);
60. PCT International Publication No. WO 07/002204, published January 4, 2007 (**Exhibit 6**);
61. European Patent Application No. EP 0992511 A, Rapigene Inc., published April 12, 2000 (**Exhibit 7**);

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116. Kolb et al., (2001) "Click Chemistry: Diverse Chemical Function From a Few Good Reactions", *Angew. Chem. Int. Ed.* 40:2004-2021 (**Exhibit 9**);
117. Lewis et al., (2002) "Click Chemistry in Situ: Acetylcholinesterase as a Reaction Vessel for the Selective Assembly of a Femtomolar Inhibitor from an Array of Building Blocks", *Angew. Chem. Int. Ed.*, 41(6):1053-1057 (**Exhibit 10**);
118. Seo et al., (2003) "Click Chemistry to Construct Fluorescent Oligonucleotides for DNA Sequencing", *J. Org. Chem.* 68:609-612

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**(Exhibit 11);**

119. Fallahpour, (2000) "Photochemical and Thermal reactions of Azido-Oligopyridines: Diazepinones, a New Class of Metal-Complex Ligands", *Helvetica Chimica Acta*. 83:384-393 **(Exhibit 12);**
120. Ikeda, K. et al., (1995) "A Non-Radioactive DNA Sequencing Method Using Biotinylated Dideoxynucleoside Triphosphates and Delta TTH DNA Polymerase" *DNA Research*, 2(31):225-227 **(Exhibit 13);**
121. Kim Sobin et al., (2002) "Solid Phase Capturable Dideoxynucleotides for Multiplex Genotyping Using Mass Spectrometry" *Nucleic Acids Research*, 30(16):e85.1-e85.6, **(Exhibit 14);**
122. Wendy S Jen, John J.M. Wiener, and David W.C. MacMillan, (2000) "New Strategies for Organic Catalysis: The First Enantioselective Organocatalytic 1,3-Dipolar Cycloaddition" *J. Am. Chem. Soc.*, 122, 9874-9875 **(Exhibit 15);**
123. Supplementary European Search Report issued February 16, 2004 in connection with European Patent Application No. 01 97 7533 **(Exhibit 16);**
124. Supplementary European Search Report issued February 9, 2007 in connection with European Patent Application No. 03 76 4568.6 **(Exhibit 17);**

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125. Supplementary European Search Report issued May 25, 2005 in connection with European Patent Application No. 02 72 8606.1 **(Exhibit 18);**
126. Supplementary European Search Report issued June 7, 2005 in connection with European Patent Application No. 01 96 8905 **(Exhibit 19);**
127. International Preliminary Examination Report issued on 3/18/05 in connection with PCT/US03/21818 **(Exhibit 20);**
128. International Preliminary Examination Report issued on 4/3/03 in connection with PCT/US01/31243 **(Exhibit 21);**
129. International Preliminary Examination Report issued on 2/25/03 in connection with PCT/US01/28967 **(Exhibit 22);**
130. International Preliminary Examination Report issued on 3/17/03 in connection with PCT/US02/09752 **(Exhibit 23);**
131. International Preliminary Report on Patentability issued on 9/5/06 in connection with PCT/US05/006960 **(Exhibit 24);**
132. International Search Report issued 5/13/02 in connection with PCT/US01/31243 **(Exhibit 25);**
133. International Search Report issued 1/23/02 in connection with PCT/US01/28967 **(Exhibit 26);**



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134. International Search Report issued 9/18/02 in connection with PCT/US02/09752 (**Exhibit 27**);
135. International Search Report issued 9/26/03 in connection with PCT/US03/21818 (**Exhibit 28**);
136. International Search Report issued 6/8/04 in connection with PCT/US03/39354 (**Exhibit 29**);
137. International Search Report issued 11/4/05 in connection with PCT/US05/06960 (**Exhibit 30**);
138. International Search Report issued 12/15/06 in connection with PCT/US05/13883 (**Exhibit 31**);
139. Written Opinion of the International Searching Authority issued 10/27/05 in connection with PCT/US05/06960 (**Exhibit 32**);
140. Written Opinion of the International Searching Authority issued 12/15/06 in connection with PCT/US05/13883 (**Exhibit 33**);
141. Elango, N. et al. (1983) "Amino Acid Sequence of Human Respiratory Syncytial Virus Nucleocapsid Protein" Nucleic Acids Research, 11(17):5941-5951 (**Exhibit 34**);
142. Buck, G.A. et al. (1999) "Design Strategies and Performance of

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Custom DNA Sequencing Primers", BioTechniques, 27(3):528-536  
(Exhibit 35);

143. Hafliger, D. et al. (1997) "Seminested RT-PCR Systems for Small Round Structured Viruses and Detection of Enteric Viruses in Seafood", International Journal of Food Microbiology, 37:27-36 (Exhibit 36);
144. Leroy, E.M. et al. (2000) "Diagnosis of Ebola Haemorrhagic Fever by RT-PCR in an Epidemic Setting", Journal of Medical Virology, 60:463-467 (Exhibit 37);
145. Kokoris, M. et al. (2000) "High-throughput SNP Genotyping With the Masscode System", Molecular Diagnosis, 5(4):329-340 (Exhibit 38); and
146. Kim, S. et al. (2003) "Multiplex Genotyping of the Human  $\beta$ 2-adrenergic Receptor Gene Using Solid-phase Capturable Dideoxynucleotides and Mass Spectrometry", Analytical Biochemistry, 316:251-258 (Exhibit 39).

This Information Disclosure Statement is being submitted under 37 C.F.R. §1.97(b). Applicant requests that the Examiner review the items listed and make them of record in the subject application.

If a telephone interview would be of assistance in advancing prosecution of the subject application, applicant's undersigned attorney invites the Examiner to telephone him at the number provided below.

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No fee is deemed necessary in connection with the filing of this Information Disclosure Statement. However, if any fee is required, authorization is hereby given to charge the amount of any such fee to Deposit Account No. 03-3125.

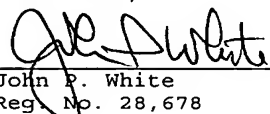
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U.S. Department of Commerce  
Patent and Trademark Office

Application Number	10/521,206
Filing Date	November 9, 2006
First Named Inventor	Jingyue Ju
Art Unit	
Examiner Name	
Attorney Docket No.	66833-A-PCT-US/JPW/BJA/ML

**INFORMATION DISCLOSURE STATEMENT**  
(Use several sheets if necessary)**U.S. PATENT DOCUMENTS**

Examiner Initials*	Cite No. <sup>1</sup>	Document Number Number-Kind Code <sup>2</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document
		4,824,775	04-25-1989	Dattagupta
		5,118,605	06-02-1992	Urdea
		5,174,962	12-29-1992	Brennan
		5,302,509	04-12-1994	Cheeseman
		5,599,675	02-04-1997	Brenner
		5,654,419	08-5-1997	Mathies
		5,728,528	03-17-1998	Mathies
		5,763,594	06-09-1998	Hiatt
		5,770,367	06-23-1998	Southern
		5,789,167	08-04-1998	Konrad
		5,804,386	09-08-1998	Ju
		5,808,045	09-15-1998	Hiatt
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Applicants: Jingyue Ju  
Serial No.: 10/521,206  
Filed: November 9, 2006  
**Exhibit A**

<b>Form PTO-1449</b>		<b>U.S. Department of Commerce Patent and Trademark Office</b>		<b>Application Number</b> 10/521,206
<b>INFORMATION DISCLOSURE STATEMENT</b> (Use several sheets if necessary)				<b>Filing Date</b> November 9, 2006
				<b>First Named Inventor</b> Jingyue Ju
				<b>Art Unit</b>
				<b>Examiner Name</b>
				<b>Attorney Docket No.</b> 66833-A-PCT-US/JPW/BJA/ML
<b>U.S. PATENT DOCUMENTS</b>				
<b>Examiner Initials*</b>	<b>Cite No.<sup>1</sup></b>	<b>Document Number Number-Kind Code<sup>2</sup> (if known)</b>	<b>Publication Date MM-DD-YYYY</b>	<b>Name of Patentee or Applicant of Cited Document</b>
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		2006/0003352	01-05-2006	Lipkin et al
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Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document Country Code <sup>3</sup> Number <sup>4</sup> Kind Code <sup>5</sup> (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	T <sup>6</sup>
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		Benson, S. C., Singh, P. and Glazer, A. N. (1993) Heterodimeric DNA-binding dyes designed for energy transfer: synthesis and spectroscopic properties. <i>Nucleic Acids Res.</i> 21:5727-5735			
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<b>INFORMATION DISCLOSURE STATEMENT</b> (Use several sheets if necessary)				<b>Filing Date</b>	November 9, 2006
				<b>First Named Inventor</b>	Jingyue Ju
				<b>Art Unit</b>	
				<b>Examiner Name</b>	
				<b>Attorney Docket No.</b>	66833-A-PCT-US/JPW/BJA/ML
<b>NON PATENT LITERATURE DOCUMENTS</b>					
<b>Examiner Initials*</b>	<b>Cite No.<sup>1</sup></b>	<b>Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.) date, page(s), volume-issue number(s), publisher, city and/or country where published.</b>			<b>T<sup>2</sup></b>
		Fallahpour, (2000) "Photochemical and Thermal reactions of Azido-Oligopyridines: Diazepinones, a New Class of Metal-Complex Ligands", Helvetica Chimica Acta. 83:384-393			
		Ikeda, K. et al., (1995) "A Non-Radioactive DNA Sequencing Method Using Biotinylated Dideoxynucleoside Triphosphates and Delta TTH DNA Polymerase" DNA Research, 2(31):225-227			
		Kim Sobin et al., (2002) "Solid Phase Capturable Dideoxynucleotides for Multiplex Genotyping Using Mass Spectrometry" Nucleic Acids Research, 30(16):e85.1-e85.6			
		Wendy S Jen, John J.M. Wiener, and David W.C. MacMillan, (2000) "New Strategies for Organic Catalysis: The First Enantioselective Orgacnocatalytic 1,3-Dipolar Cycloaddition" J. Am. Chem. Soc., 122, 9874-9875			
		Supplementary European Search Report issued February 16, 2004 in connection with European Patent Application No. 01 97 7533			
		Supplementary European Search Report issued February 9, 2007 in connection with European Patent Application No. 03 76 4568.6			
		Supplementary European Search Report issued May 25, 2005 in connection with European Patent Application No. 02 72 8606.1			
		Supplementary European Search Report issued June 7, 2005 in connection with European Patent Application No. 01 96 8905			
		International Preliminary Examination Report issued on 3/18/05 in connection with PCT/US03/21818			
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		International Preliminary Examination Report issued on 4/3/03 in connection with PCT/US01/31243			
		International Preliminary Examination Report issued on 2/25/03 in connection with PCT/US01/28967			
		International Preliminary Examination Report issued on 3/17/03 in connection with PCT/US02/09752			
		International Preliminary Report on Patentability issued on 9/5/06 in connection with PCT/US05/006960			
		International Search Report issued 5/13/02 in connection with PCT/US01/31243			
		International Search Report issued 1/23/02 in connection with PCT/US01/28967			
		International Search Report issued 9/18/02 in connection with PCT/US02/09752			
		International Search Report issued 9/26/03 in connection with PCT/US03/21818			
		International Search Report issued 6/8/04 in connection with PCT/US03/39354			
		International Search Report issued 11/4/05 in connection with PCT/US05/06960			
		International Search Report issued 12/15/06 in connection with PCT/US05/13883			
		Written Opinion of the International Searching Authority issued 10/27/05 in connection with PCT/US05/06960			
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		Elango, N. et al. (1983) "Amino Acid Sequence of Human Respiratory Syncytial Virus Nucleocapsid Protein" Nucleic Acids Research, 11(17):5941-5951			
		Buck, G.A. et al. (1999) "Design Strategies and Performance of Custom DNA Sequencing Primers", BioTechniques, 27(3):528-536			
		Hafliger, D. et al. (1997) "Seminested RT-PCR Systems for Small Round Structured Viruses and Detection of Enteric Viruses in Seafood", International Journal of Food Microbiology, 37:27-36			
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		Kokoris, M. et al. (2000) "High-throughput SNP Genotyping With the Masscode System", Molecular Diagnosis, 5(4):329-340			
		Kim, S. et al. (2003) "Multiplex Genotyping of the Human $\beta$ 2-adrenergic Receptor Gene Using Solid-phase Capturable Dideoxynucleotides and Mass Spectrometry", Analytical Biochemistry, 316:251-258			
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